What is claimed is:

1. A fuel cartridge, comprising:

a housing defining an enclosed space and having an open end, wherein the housing comprises:

a first chamber adapted to contain fuel; and

a second chamber adapted to receive gaseous fuel, the second chamber being separated from the first chamber by a chamber-separating septum which is permeable to the gaseous fuel; and

a septum covering the open end.

2. The fuel cartridge as defined in claim 1 wherein the housing is formed from polymeric materials.

3. The fuel cartridge as defined in claim 1 wherein the fuel is a hydrogen fuel.

4. The fuel cartridge as defined in claim 3 wherein the hydrogen fuel is a liquid.

5. The fuel cartridge as defined in claim 3 wherein the hydrogen fuel is suspended in a foam material.

6. The fuel cartridge as defined in claim 4 wherein the hydrogen fuel is an aqueous solution of sodium borohydride.

7. The fuel cartridge as defined in claim 5 wherein the hydrogen fuel is an aqueous solution of sodium borohydride.

8. The fuel cartridge as defined in claim 5 wherein the foam material is at least one of polyurethanes, modified polyurethanes, melamines,

melamine/formaldehydes, cellulose, polyethylenes, polypropylenes, and mixtures thereof.

9. The fuel cartridge as defined in claim 1 wherein the chamber-separating septum is at least one of porous and partially porous.

10. The fuel cartridge as defined in claim 1 wherein the septum covering the end is a barrier to the gaseous fuel.

11. The fuel cartridge as defined in claim 1 wherein the chamber-separating septum is adapted to receive a needle, wherein the septum covering the end is adapted to receive the needle, and wherein the needle has a hollow interior adapted to be in fluid communication with the second chamber, and wherein the hollow interior is adapted to receive the gaseous fuel.

12. A fuel cell, comprising:

at least one electrode;

an electrolyte in electrochemical contact with the at least one electrode; and

a needle connected at one end to the fuel cell, the needle comprising:

a hollow member adapted to receive fuel, the hollow member being in fluid communication with the fuel cell; and

at least one inlet pore defined in the hollow member;

wherein the at least one electrode is adapted to receive fuel from the hollow member.

13. The fuel cell as defined in claim 12 wherein the at least one electrode is one of an anode and a cathode.

14. The fuel cell as defined in claim 12 wherein the hollow member is a metal.

15. The fuel cell as defined in claim 14 wherein the metal is at least one of ruthenium, palladium, platinum, nickel, gold, copper, silver, alloys thereof, stainless steel, and mixtures thereof.

16. The fuel cell as defined in claim 12 wherein the needle further comprises a tip located at a second end distal to the needle one end, the tip having a coating thereon formed from a catalyst material.

17. The fuel cell as defined in claim 16 wherein the catalyst material is a metal.

18. The fuel cell as defined in claim 17 wherein the metal is at least one of ruthenium, palladium, platinum, nickel, gold, silver, alloys thereof, and mixtures thereof.

19. The fuel cell as defined in claim 16 wherein the needle is connected at a first region of the fuel cell, and wherein the fuel cell is adapted to recharge a battery adapted to be operatively connected to the fuel cell at a second region of the fuel cell.

20. The fuel cell as defined in claim 16 wherein the needle is adapted to enter a fuel cartridge, the fuel cartridge comprising:

a housing defining an enclosed space and having an open end, wherein the housing comprises:

a first chamber adapted to contain fuel; and

a second chamber adapted to receive gaseous fuel, the second chamber being separated from the first chamber by a chamber-separating septum adapted to receive the needle, the chamber-separating septum being permeable to the gaseous fuel; and

a septum covering the open end, wherein the septum covering the open end is adapted to receive the needle.

21. The fuel cell as defined in claim 20 wherein the needle enters the fuel cartridge such that the tip is received within the first chamber and the at least one inlet pore is received within the second chamber.

22. The fuel cell as defined in claim 21 wherein the first chamber defines an area for a reaction to take place between the catalyst material coated on the tip and the fuel contained in the first chamber, wherein the reaction produces the gaseous fuel.

23. The fuel cell as defined in claim 22 wherein the reaction is driven by partial pressures, thereby driving the gaseous fuel into the second chamber through the chamber-separating septum, through the at least one inlet pore, through the hollow member, and into the fuel cell.

24. An electronic device, comprising:

a load; and

a fuel cell as defined in claim 16 connected to the load.

25. The electronic device as defined in claim 24 wherein the hollow member is a metal.

26. The electronic device as defined in claim 25 wherein the metal is at least one of ruthenium, palladium, platinum, nickel, gold, copper, silver, alloys thereof, stainless steel, and mixtures thereof.

27. The electronic device as defined in claim 24 wherein the catalyst material is a metal comprising at least one of ruthenium, palladium, platinum, nickel, gold, silver, alloys thereof, and mixtures thereof.

28. The electronic device as defined in claim 24, further comprising:

a receptacle adapted to receive a fuel cartridge, whereby the needle of the fuel cell is inserted into the fuel cartridge, the fuel cartridge comprising:

a housing defining an enclosed space and having an open end, wherein the housing comprises:

a first chamber adapted to contain fuel; and

a second chamber adapted to receive gaseous fuel, the second chamber being separated from the first chamber by a chamber-separating septum adapted to receive the needle, the chamber-separating septum being permeable to the gaseous fuel; and

a septum covering the open end, wherein the septum is adapted to receive the needle.

29. The electronic device as defined in claim 28 wherein the fuel is a hydrogen fuel.

30. The electronic device as defined in claim 29 wherein the hydrogen fuel is an aqueous solution of sodium borohydride.

31. The electronic device as defined in claim 30 wherein the sodium borohydride solution is suspended in a foam material.

32. The electronic device as defined in claim 31 wherein the foam material is at least one of polyurethanes, modified polyurethanes, melamines,

melamine/formaldehydes, cellulose, polyethylenes, polypropylenes, and mixtures thereof.

33. The electronic device as defined in claim 28 wherein the chamber-separating septum is at least one of porous and partially porous.

34. The electronic device as defined in claim 28 wherein the septum covering the end of the fuel cartridge is a barrier to hydrogen gas.

35. The electronic device as defined in claim 28 wherein the fuel cell is adapted to recharge a battery operatively connected within the electronic device.

36. The electronic device as defined in claim 35, wherein the fuel cartridge enters the receptacle whereby the needle enters the fuel cartridge such that the needle tip is received within the first chamber and the at least one inlet pore of the hollow member is received within the second chamber.

37. The electronic device as defined in claim 36 wherein the first chamber defines an area for a reaction to take place between the catalyst material coated on the tip and the fuel contained in the first chamber, wherein the reaction produces the gaseous fuel.

38. The electronic device as defined in claim 37 wherein the reaction is driven by partial pressures, thereby driving the gaseous fuel into the second chamber through the chamber-separating septum, through the at least one inlet pore, through the hollow member, and into the fuel cell, wherein the fuel cell converts the gaseous fuel into electricity, thereby recharging the battery.

39. A method of making a battery recharge system, the method comprising the steps of:

operatively connecting a fuel cell to a battery, the fuel cell comprising:

at least one electrode;

an electrolyte in electrochemical contact with the at least one electrode; and

a needle connected to the fuel cell, the needle comprising:

a hollow member adapted to receive gaseous fuel flow, the hollow member being in fluid communication with the fuel cell;

a closed tip located on an end of the hollow member, the tip having a coating thereon formed from a catalyst material; and

at least one inlet pore defined in the hollow member; and

inserting the needle into a fuel cartridge, the fuel cartridge comprising:

a housing defining an enclosed space and having an open end, wherein the housing comprises:

a first chamber adapted to contain fuel; and

a second chamber adapted to receive the gaseous fuel, the second chamber being separated from the first chamber by a chamber-separating septum adapted to receive the needle, the chamber-separating septum being permeable to the gaseous fuel; and

a septum covering the open end, wherein the septum is adapted to receive the needle;

wherein the catalyst material reacts with the fuel to form the gaseous fuel, and wherein the fuel cell converts the gaseous fuel into electricity, thereby recharging the battery.

40. The method as defined in claim 39 wherein the hydrogen fuel is sodium borohydride.

41. The method as defined in claim 40 wherein the hydrogen fuel is an aqueous solution of sodium borohydride suspended in a foam material within the first chamber.

42. The method as defined in claim 39 wherein the catalyst material is at least one of ruthenium, palladium, platinum, nickel, gold, silver, alloys thereof, and mixtures thereof.

43. The method as defined in claim 39 wherein the inserting step is accomplished by pushing the fuel cartridge such that the needle enters the fuel cartridge, whereby the tip is received within the first chamber and the at least one inlet pore is received within the second chamber.

44. The method as defined in claim 43 wherein the reaction is driven by partial pressures, thereby driving the gaseous fuel into the second chamber through the chamber-separating septum, through the at least one inlet pore, through the hollow member, and into the fuel cell.

45. A method of using a fuel cell, comprising the step of:

operatively connecting the fuel cell to at least one of an electrical load and an electrical storage device, the fuel cell comprising:

at least one electrode;

an electrolyte in electrochemical contact with the at least one electrode; and

a needle connected at one end to the fuel cell, the needle comprising:

a hollow member adapted to receive fuel, the hollow member being in fluid communication with the fuel cell; and

at least one inlet pore defined in the hollow member;

wherein the at least one electrode is adapted to receive fuel from the

hollow member, wherein the fuel cell converts the fuel to electricity, and wherein at least one of the load and the storage device receives the electricity from the fuel cell.

46. The method as defined in claim 45 wherein the at least one electrode is one of an anode and a cathode.

47. A fuel cell operatively connected to and powering an electronic device, the fuel cell comprising:

at least one electrode;

an electrolyte in electrochemical contact with the at least one electrode; and

means for delivering fuel to the fuel cell while powering the electronic device.